

CN lab test 2

IBM18CS106
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Batch C1

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

char g[] = "10000111", p[50], c[50], //  $x^8 + x^2 + x + 1$ 
int n1, n2;

void xor()
{
    int i;
    for(i=0; i < n1; i++)
    {
        if(c[i] == g[i])
            c[i] = '0';
        else
            c[i] = '1';
    }
}

void CRC()
{
    int i, cnr;
    for(cnr=0; cnr < n1; cnr++)
    {
        c[cnr] = p[cnr];
    }
}
```



```

do
{
    if (c[0] == '1')
    {
        xor();
    }
    for (i = 0; i < n1 - 1; i++)
    {
        c[i] = c[i + 1];
    }
    c[i] = p[cn++];
} while (cn < n2 + n1);
}

```

```

void main()
{
    int i;
    printf("Enter data: ");
    scanf("%s", p);
    n1 = strlen(g);
    n2 = strlen(p);
    for (i = n2; i < n2 + n1; i++)
        p[i] = '0';

    cac();
    printf("Checksum is : %s \t", p);
    printf("(wired code : %s \n", g);
}

```



```
for(i = n2; i < n2 + n1; i++)
```

```
{ p[i] = c[i - n2];
```

```
}
```

```
printf("Transmitted code or code word:  
%s\n", p);
```

```
printf("Enter code received: ");
```

```
scanf("%s", p);
```

```
call();
```

```
for(i = 0; i < strlen(c); i++)
```

```
{ if (c[i] == '1')
```

```
{ printf("Error!\n");  
exit(0);
```

```
}
```

```
}  
printf("No error\n");
```

```
}
```